

REMARKS

Claims 1-3 and 5-23 remain in the application for consideration of the Examiner, with Claim 4 standing canceled.

Reconsideration and withdrawal of the outstanding rejections and objections are respectfully requested in light of the above amendments and following remarks.

Claim 1 has been amended to clarify the invention.

The drawings were objected to.

By separate letter, a proposed drawing correction to Figures 2, 4, 6, 10, and 12 has been submitted for consideration of the Examiner. The Examiner alleges that DAC must be shown. The Examiner's attention is directed to Figure 4 element 50. Here, the DAC is shown.

Is is respectfully submitted that these proposed drawing corrections and arguments obviates the objection to the drawings.

Claims 2, 3, 8, 19, and 22 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

By the instant amendment, Claims 2, 3, 18, and 22 have been amended to take into consideration the helpful comments of the Examiner.

It is respectfully submitted that Claims 1-3 and 5-23 are in full compliance with 35 U.S.C. §112 and particularly points out and distinctly claims the subject matter which Applicants believe is their invention.

Turning now to the art rejections, Claims 1-9 were rejected under 35 U.S.C. §102(b) as being anticipated by Wilson; Claims 10-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wilson in view of Fontanella; and Claims 20-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wilson in view of Kondou.

These rejections are respectfully traversed.

It is respectfully submitted that Wilson does not disclose or suggest the presently claimed invention including a piezo actuator drive circuit to drive a disk as defined in independent Claim 1. *preamble + new*

Wilson is directed to an ultrasonic generator and consequently could not disclose or suggest the presently claimed invention.

It is respectfully submitted that Fontanella does not disclose or suggest the presently claimed invention including a drive amplifier adapted to drive a piezo actuator in a voltage mode and in a charge mode as defined in independent Claim 1. *(?) it is not defined*

Fontanella discloses a driver circuit for controlling a piezo actuator in a charge mode. However, nothing in Fontanella discloses a charge circuit to drive a piezo actuator in both and voltage mode and a charge mode. *not defined*

Whether or not Kondou discloses a DC control circuit, a compensation loop, a DAC, and an ADC and whether one of ordinary skill in the art would consider modifying Wilson is of no moment since the result in construction would in no way disclose or suggest the presently claimed invention. *reason to combine*

It is respectfully submitted that Claims 1-3, and 5-23 patentably define over the applied art.

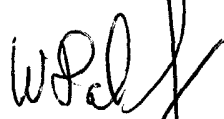
In light of the above, it is respectfully submitted that the present application is in condition for allowance, and notice to that effect is respectfully requested.

While it is believed that the instant response places the application in condition for allowance, should the Examiner have any further comments or suggestions, it is respectfully requested that the Examiner contact the undersigned in order to expeditiously resolve any outstanding issues.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

To the extent necessary, Applicant petitions for an Extension of Time under 37 CFR 1.136. Please charge any fees in connection with the filing of this paper, including extension of time fees, to the deposit account of Texas Instruments Incorporated, Account No. 20-0668.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the title:

The title has been amended as follows:

~~OUTPUT VOLTAGE SENSING OF CHARGE AND VOLTAGE MODE ACTUATOR DRIVES~~

OUTPUT VOLTAGE SENSING OF CHARGE MODE AND VOLTAGE MODE ACTUATOR TO DRIVER HAVING A CURRENT MIRROR AMPLIFIER TYPE A/B

Claims 1-3, 18, and 22 have been amended as follows:

1. A piezo actuator drive circuit to drive a disk, comprising:
a drive amplifier having an input, and an output adapted to drive a piezo actuator in a voltage mode and a charge mode; and
a sensing circuit coupled to the drive amplifier sensing a parameter of the piezo actuator.
2. The drive circuit as specified in Claim 1 wherein the sensing circuit is selectively coupled to the piezo actuator in a said voltage mode.
3. The drive circuit as specified in Claim 1 wherein the sensing circuit selectively coupled to the piezo actuator in a said charge mode.
18. The drive circuit as specified in Claim 17 wherein the drive circuit includes a capacitor is being coupled to the first output and the piezo actuators are adapted to be driven by the second output.
22. The drive circuit as specified in Claim 1 further comprising a digital-to-analog (DAC) coupled to one an input of said drive amplifier input and a voltage reference being coupled to another drive amplifier input.